

REMARKS

Claims 1-14 are pending in this application.

Claims 1 and 14 have been amended.

The specification has been corrected to properly name the chemical structure shown in the Reaction scheme 4. No new matter has been added.

I. Claim Rejections – 35 U.S.C. §103

Claims 1, 7, 9, 10, and 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0034656 A1.

In the previous Office action (Paper No. 20050121), the examiner argued that the '656 publication discloses similar Ir based compound such as the compound having the formula of Fig.49, and that positional isomers are not considered to be patentably distinct unless there is a showing of unexpected results.

In response to the previous Office action (Paper No. 20050121), the applicant explained why the examiner failed to show a prima facie case of obviousness.

In the Office action (Paper No. 20050616), the examiner did not answer all material traversed in the applicant's response filed on April 22, 2005.

MPEP 707.07(f) states that:

“In order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken by the examiner during prosecution of an application.

Where the requirements are traversed, or suspension thereof requested, the examiner should make proper reference thereto in his or her action on the amendment.

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it."

Here, the examiner did not answer the substance of the applicant's response, and merely did state that "indicating that applicants core as given is not imperative to the invention. Thus in the absence of any showing the prior art is prima facie obvious."

The examiner's rejection is hardly understood because the above sentences are not complete. We respectfully request clarify what the above sentences mean. Also, the applicant respectfully requested the examiner to provide a complete and clear action by answering the substance of the applicant's response. Also, the applicant pointed out that the examiner failed to establish a prima facie case of obviousness **under *Ex parte Mowry***. In response to the applicant's response, the examiner merely argued that in the absence of any showing the prior art, there is a prima facie case of obviousness. It is not clear what the examiner's reasoning is and what her analysis is under *Ex parte Mowry*.

The applicant repeated herein the response to the examiner's previous rejection under 35 U.S.C. 103.

Isomerism by itself should not raise a prima facie case of obviousness. *Ex parte Mowry*, 91 USPQ 219, 221 (Bd. Pat. App. 1950). MPEP §2144.09 also recites this decision: "Isomers having the same empirical formula but different structures are not necessarily considered equivalent by chemists skilled in the art and therefore are not necessarily suggestive of each other. (claimed cyclohexylstyrene not prima facie obvious over prior art isohexylstyrene).

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is

under no obligation to submit evidence of nonobviousness.

Indeed, the Federal Circuit has admonished against generalizing, especially in the area of chemical structural obviousness, requiring proof in the prior art to support a proposed structural change. See *In re Grabiak*, 769 F.2d 729, 731-32, 226 USPQ 870, 872 (Fed. Cir. 1985) (finding no prima facie obviousness where the prior art did not suggest appellant's substitution of a thioester for an ester substituent on a carboxamide compound). A generalized conclusion based on isomerism alone also did not support a prima facie case of obviousness in *Ex parte Hogg*, 121 USPQ 96 (Bd. Pat. App. 1958).

Here, the examiner improperly applied to a generalized conclusion based on an isomerism alone.

There is no suggestion or motivation to modify the '656 publication.

In addition, the specification of the present invention expressly states that the claimed compounds solve the problems of the prior art compounds.

The presumption of obviousness based on a reference disclosing structurally similar compounds may be overcome where there is evidence showing there is no reasonable expectation of similar properties in structurally similar compounds. *In re May*, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978)

Moreover, the claimed invention is not directed to a phenyl quinoline itself. The claimed invention is directed to an Ir based complex having a phenyl quinoline group. That is, the Ir based complex has a different conformation according to ligands. Where the Ir based complex has the same empirical formula but different structures, the conformation of the Ir based complex has a different conformation. This different conformation is translated to a different function. The

specification expressly states that higher energy transfer efficiency and luminescent efficiency is attributed to the specific conformation of the formula 1.

A *prima facie* case of obviousness based on structural similarity is rebuttable by proof that the claimed compounds possess unexpectedly advantageous or superior properties. *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (Affidavit evidence which showed that claimed triethylated compounds possessed anti-inflammatory activity whereas prior art trimethylated compounds did not was sufficient to overcome obviousness rejection based on the homologous relationship between the prior art and claimed compounds.); *In re Wiechert*, 370 F.2d 927, 152 USPQ 247 (CCPA 1967) (a 7-fold improvement of activity over the prior art held sufficient to rebut *prima facie* obviousness based on close structural similarity).

Here, the applicant expressly stated that the compounds according to present invention has excellent luminescent efficiency and film stability, whereas it is expressly stated in the specification that the compounds disclosed in U.S. 2002/0121638A1 and U.S 2002/0034656 A1 still require improvements in luminescent efficiency and film stability. (See the specification on page 3, lines 7-12).

The examiner disregarded the above descriptions in the specification, and merely argued that applicants do not show unexpected results.

Therefore, the rejection should be withdrawn.

If the examiner does not agree with the applicant, the examiner's complete and clear answer to the applicant's response is respectfully requested.

II. Claim Rejections – 35 U.S.C. §112

A. Claim 1 and 12-14 stand rejected under 35 U.S.C. §112, first paragraph.

The examiner argued that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The examiner's rejection is not proper for the following reasons.

The examiner cited *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) and listed factors to be considered when determining the enablement requirement.

In re Wands cited *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. & Int. 1986). In *Ex parte Forman*, the court held that "[t]he test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed." *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. & Int. 1986).

Please also note that, in *In re Wands*, "[t]he Court held that the specification was enabling with respect to the claims at issue and found that "there was considerable direction and guidance" in the specification; there was "a high level of skill in the art at the time the application was filed;" and "all of the methods needed to practice the invention were well known." 858 F.2d at 740, 8 USPQ2d at 1406. After considering all the factors related to the enablement issue, the court

concluded that "it would not require undue experimentation to obtain antibodies needed to practice the claimed invention." Id., 8 USPQ2d at 1407.

While the determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness, the examiner merely listed each factor without explaining a proper reasoning. For example, the examiner merely stated that the nature of the invention is compounds used as a host material to form an emissive layer of an organic EL device. Also, the examiner merely stated that it is unknown what the level of predictability is in the art. The examiner improperly argued that there are no working examples. Moreover, the examiner admitted that a factor supports the enablement of the present application by arguing that the ordinary artisan is highly skilled. Please note that, the more skill those in the art have, the less information an applicant has to disclose in order to meet the enablement requirement. That is, the examiner's analysis is inconsistent with her position, and is not sufficient.

It should be noted that the specification clearly includes Examples and the specific compounds. The specific compounds include the compounds represented by Formulae 2 through 7. Furthermore, Examples of substituted groups are expressly stated from para [0039] through [0047]. Synthesis examples are explained from para [0071] through [0092], and examples of using the compounds are explained from para [0093] through [0098].

It is hardly understood why the examiner stated that the instant application does not have any working examples. **The applicant does not have to disclose how to use and make all the compounds within the scope of claims**, if it is merely routine or well known, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation. The method of making or using listed groups in claim 1 is well known

or routine, and, in view of the disclosed synthetic examples and the specification, the ordinary skilled person can make and use the claimed invention. That is, the specification provides a reasonable amount of guidance. Also, the examiner admitted that the level of one of ordinary skill is high. If the examiner's argument is right, the less information is needed to meet the enablement requirement.

Also, the examiner is requested to provide an example compound (or group) that, in the examiner's view, cannot be made or used by the ordinary skilled person. Withdrawal of the rejection is requested.

B. Claims 1, 7, 9 and 10, and 12-14 stand rejected under 35 U.S.C. 112, second paragraph.

1. Regarding the rejections on claims 7, 9 and 10, claim 1 has been amended to include hydrogen for R1-R10.

Withdrawal of the rejection is respectfully requested.

2. Regarding rejection on claim 1, the examiner stated that the structures listed as X in claim 1 do not correspond to the X groups as given in claims 7, 9 and 10. The structures for X in claims 7 and 10 show proline and 1-(2-hydroxyphenyl pyrazolate), respectively. The structure for X in claim 9 show 2-quinoline carboxylic acid. Claim 1 has been amended to more clearly define the present invention. The compounds of claims 7, 9 and 10 are within the scope of claim 1.

Withdrawal of the rejection is respectfully requested.

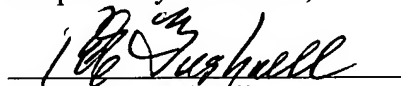
3. Claim 14 has been amended by replacing "using" with "comprising" to define a product.

Withdrawal of the rejection is respectfully requested.

In view of the above, all claims are submitted to be allowable and this application is believed to be in condition to be passed to issue. Reconsideration of the rejections is requested. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fees are incurred by this Amendment.

Respectfully submitted,



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